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MULTIFUNCTIONAL MILK-PASSING BREAST-STIMULATING DEVICE  
[Duo gong neng tong ru jian ru qi]

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| TITLE                                     | (54):  | MULTIFUNCTIONAL MILK-PASSING<br>BREAST-STIMULATING DEVICE                 |
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## Claims

1. A multifunctional milk-passing, breast-stimulating device comprising a bra for the whole breast therein the bra consists of 2 combined covers of an inner bra and an outer bra linked together, characterized in that an electric heater is furnished between the inner bra and the outer bra and that said electric heater may be electric heating wire, electric heating membrane or PCT ceramic electric heating element.
2. A multifunctional milk-passing, breast-stimulating device described in Claim 1, characterized in that a permanent magnet is furnished between the inner bra and the electric heater and that coils are wound around the permanent magnet.
3. A multifunctional milk-passing, breast-stimulating device described in Claims 1 and 2, characterized in that an electric vibrator may be furnished between the inner bra and the outer bra.
4. A multifunctional milk-passing, breast-stimulating device described in Claim 3, characterized in that the electric vibrator is furnished at the front center of the bra.
5. A multifunctional milk-passing, breast-stimulating device described in Claims 1 and 2, characterized in that an opening is furnished at the front center of the bra which is connected to a rear connecting head while the other end of the rear connecting head is connected to a suction ball device.
6. A multifunctional milk-passing, breast-stimulating device described in Claims 1 and 2, characterized in that an opening is furnished at the front center of the bra which is connected to a milk-suction tube equipped with a milk storing bottle and that the other end of the milk suction tube is connected to a suction ball device.
7. A multifunctional milk-passing, breast-stimulating device described in Claim 6, characterized in that the front end of said milk suction tube is furnished with a ring of nipple-securing openings protruding inward.

8. A multifunctional milk-passing, breast-stimulating device described in Claim 6, characterized in that the vibrator may be fitted on the wall of the milk suction tube or between the inner bra and outer bra.

9. A multifunctional milk-passing, breast-stimulating device described in Claim 7, characterized in that the vibrator may be fitted on the wall of the milk suction tube or between the inner bra and outer bra.

### Description

#### Technical field

This practical new design relates to a multifunctional milk-passing, breast-stimulating device, belonging to the field of health products.

#### Prior art

Various existing multifunctional milk-suction devices all apply the same technique of using a suction ball for repeated compression in which the negative pressure generated from release suctions out the accumulated milk, achieving the purpose of relieving lactiferous ducts, preventing mastitis and enriching the breast. However, such milk suction devices are not ideal with respect to their effectiveness for alleviating milk stasis or for patients who have mastitis or lobular hyperplasia when they are applied application. These devices are not effective in relieving mastoptosis or correcting uneven breast sizes for nursing women. Chinese Patent No. 00267494.7 -- "Multifunctional milk-passing and milk suction device" -- gives good news to nursing women by providing relatively greater effectiveness in smoothing lactiferous ducts, preventing mastoptosis and stimulating breasts. Said device the cavity of a bra with a liquid and warms the breast after suctioning the accumulated milk by heating the liquid while also relieving and healing mastitis rather rapidly. However, the liquid in the cavity of said milk suction device leaks easily and the overall weight is relatively high; thus, it is rather inconvenient to use.

Chinese Patent No. 99231278.7 -- "Low-temperature thermal power breast-stimulating and therapeutic device" -- which provides certain effectiveness in stimulating breasts and treating lobular hyperplasia, but the device cannot be used to treat mastitis because it lacks the function of suctioning milk. The infection in patients with mastitis will worsen and diffuse rapidly during fomentation if breast is not relieved of the infectious milk stasis. Furthermore, leaking milk can lead to electrical short circuits or leakage of electricity, thus the device is not very safe.

#### Content of the invention

The objective of the present practical design focuses on the deficiencies of the current techniques and lies in providing nursing women with a therapeutic and healthful device for smooth passing of milk and stimulating breasts with ideal results. Said multifunctional milk-passing, breast-stimulating device comprises a bra for the whole breast in that the bra consists of an inner bra and an outer bra, and that an electric heater such as electric heating wire, electric heating membrane or PCT ceramic heating element regulated by a thermostatic circuit is furnished between the inner bra and the outer bra; a permanent magnet or an electric vibrator may be furnished in the inner cavity of the bra; an opening is furnished at the front center of the bra, which is connected to the milk suction tube with a screw while the other end of the milk suction tube is connected to a suction ball device. The present practical design can be utilized for suctioning milk from the breast and fomentation, or for generating an alternating field to provide vibrating and massaging, thus, the device can drain the channels, regulate *qi* and blood circulation, invigorate blood and relieve stasis, and prevent and treat mastitis and has the function of helping to lift up small and recessed nipples, thus long-term application can help stimulate and plump the breast. The device has also the function of relieving and dissipating painful swelling in the breasts

from lobular hyperplasia of the breast glands, which eliminates the risks of side effects from medications and the pain of surgery.

#### Brief description of the figures

Figure 1 is a structural diagram of the present practical design.

Figure 2 is another structural diagram of the present practical design.

Figure 3 is still another structural diagram of the present practical design.

Figure 4 is a structural diagram of the rear connecting head.

Figure 5 is a structural diagram of the suction ball device.

Symbols in the figures: 1 – small opening, 2 – outer bra, 3- inner bra, 4 – permanent magnet, 5 – support, 6 – electric heater, 7 – electric vibrator, 8 – outlet, 9 – nipple securing opening, 10 – passing opening, 11- milk suction tube, 12 – milk storage bottle, 13 – rear connecting head, 14 – suction ball device.

#### Specific application examples

##### Application Example 1, as shown in Figure 1

The multifunctional milk-passing, breast-stimulating device is a trumpet-shaped bra for the whole breast comprising outer bra 2 and inner bra 3, and electric heater 6 furnished between the bras. Said electric heater 6 may be an electric heating wire, electric heating membrane or a PCT ceramic heating element. The electric heating wire may be wound around support 5 along the diameter in the bra. Permanent magnet 4 may be furnished between inner bra 3 and electric heater 6 while wound with coils to enhance the alternating magnetic field. Electric vibrator 7 may be furnished between the inner and outer bra, and in the present application example, electric vibrator 7 is furnished at the front center of the

bra. The wires from the electric heater and electric vibrator are connected to the circuit control board after passing through exit opening 8 on the wall of the bra. The device is connected to an electric power source during application to provide an output voltage of 6V, 24V or 36V through the control board. Fomentation of the breast can be conducted right away by turning on the heater switch. Breast massage can be experienced by turning on the switch of the electric vibrator. Small opening 1 is furnished at the trumpet opening of the bra; more desirable effects can be obtained if medication or conductive rubber is placed in small opening 1. The present application example provides excellent relief, treatment and eradication of lobular hyperplasia and painful swelling of the breast.

#### Application Example 2, as shown in Figure 2

Passing opening 10 is furnished at the front center of the bra of the present application example, which is connected to milk suction tube 11 with a screw; the front end of the milk suction tube has a nipple-securing opening 9 protruding inward, and milk storing bottle 12 fitted at the bottom of the milk suction tube, while the milk exiting opening on top of the milk suction tube is connected to said milk storing bottle. Electric vibrator 7 may be fitted to the side wall of the milk suction tube. The rear end of the milk suction tube is connected to the suction ball device. As shown in Figure 5, said suction ball device comprises a one-way gas releasing valve, a one-way valve opened to the atmosphere and a suction ball. Negative pressure is generated in the breast by repeatedly compressing and releasing the suction ball, which draws out the recessed nipple and smoothes out the breast gland, pumping pushes the milk to pass through the opening for milk passage on the side wall of the milk suction tube into the milk storing bottle. If necessary, fomentation and massaging can be performed on the breast simultaneously by connecting to a power source and turning the switches on of the electric heater and the electric vibrator. The other elements of the structure are the same as those in Application Example 1. The

present application example exhibits excellent results pumping milk and preventing/treating mastitis, recessed nipples and lobular hyperplasia. The device is an ideal tool for preventing mastoptosis and stimulating and plumping the breasts of nursing women if utilized consistently.

#### Application Example 3, as shown in Figure 3

Electric vibrator 7 is furnished between inner bra 3 and outer bra 2 in the present application example while the rest of the structure is the same as that of Application Example 2. The device exhibits excellent results in pumping milk and is an ideal tool for preventing and treating mastitis, lobular hyperplasia and recessed nipples and for stimulating and plumping the breasts of nursing women.

#### Application Example 4

Milk suction tube 11 connected to the front end of the bra in the aforementioned Application Example 3 is replaced with rear connecting head 13 (as shown in Figure 4) and a suction ball device is furnished on the other end of said rear connecting head. The cost of the present application example is low and yields excellent results in stimulating and plumping the breasts and treating lobular hyperplasia.



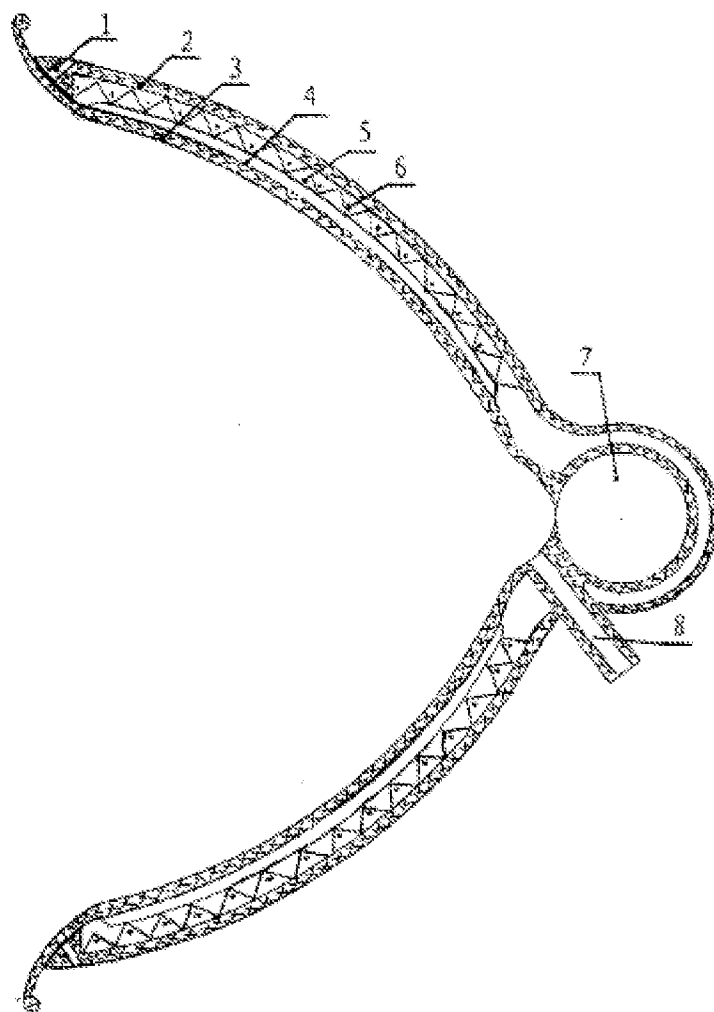


Figure 1

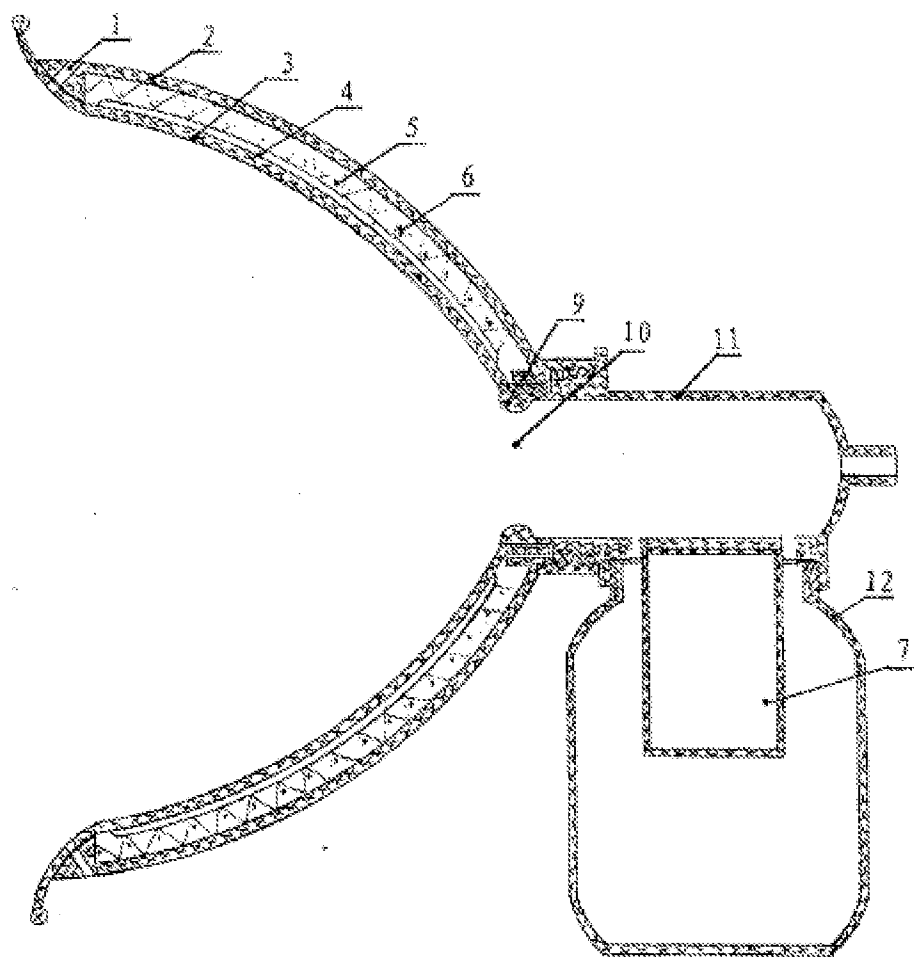


Figure 2

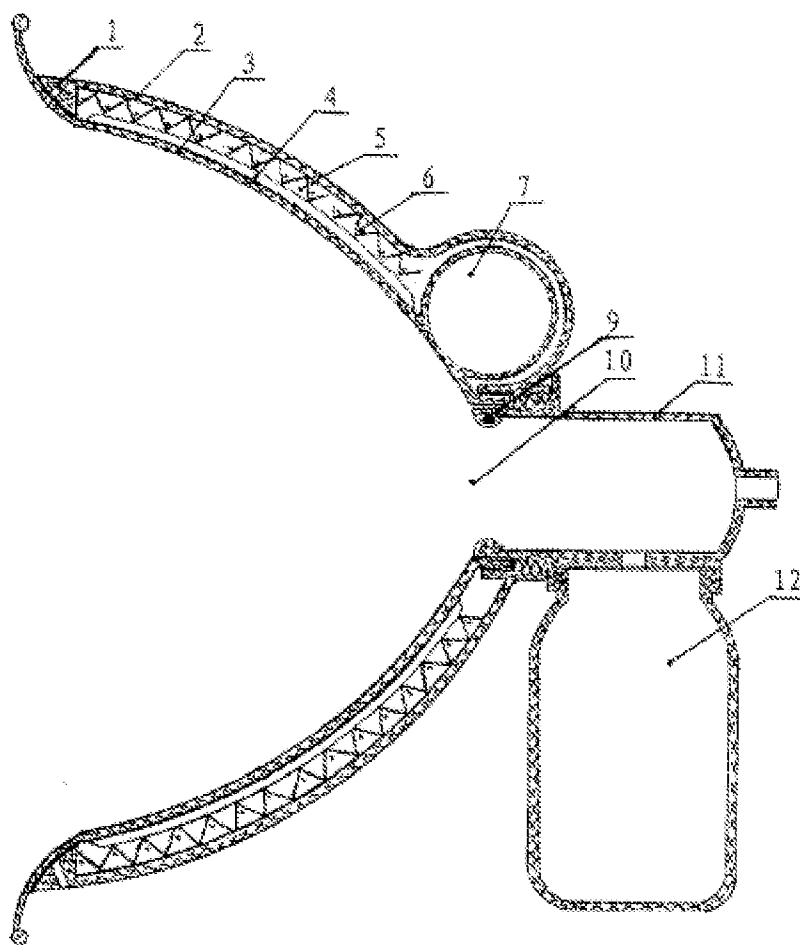


Figure 3

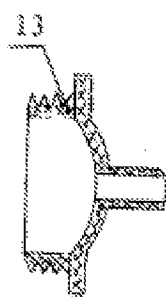


Figure 4

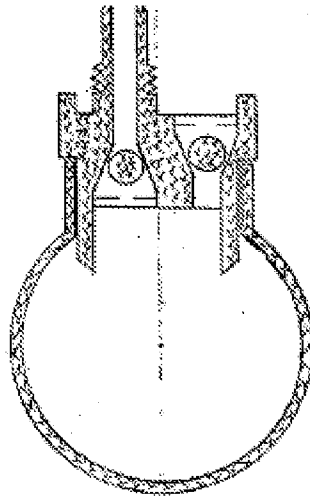


Figure 5